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paratively inferior instruments with which both Lalande's and Piazzi's observations were made. The proper motion in R.A. certainly shows a gradual diminution in the value from group to group, but by a quantity so minute that it probably owes its origin more to accident than to any other cause. If there had been any real changes similar to those indicated by the Edinburgh observations, they must have appeared in the resulting Greenwich values, which the excellent series of observations lately made at the Royal Observatory has enabled me to determine.

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1876. March 7.*

On a Supposed Variability of the Proper Motion of B.A.C. 793. By E. J. Stone, Esq., F.R.S., Her Majesty's Astronomer, Cape of Good Hope.

In the *Monthly Notices* for May 1875 there appeared an interesting paper by Professor C. Piazzi Smyth, in which an attempt is made to prove that the proper motions of the star B.A.C. 793 have varied sensibly since 1837. On reading the paper, I was much struck with the fact that the whole argument in favour of the variability of the proper motion turns upon the extreme accuracy of the Edinburgh observations made in 1837. I find that the star B.A.C. 793 was observed at the Cape no less than fourteen times in Right Ascension in the year 1837. Unfortunately, it was not also observed in North Polar Distance.

If we assume the proper motion in Right Ascension to be $0^s.120$, then we have:

1837 Jan. 1 R.A. of B.A.C. 793 = $2^h 27^m 9^s.155$.

The number of observations upon which this result depends is 14, and the fraction of the year for which proper motion has been applied is 0.89.

It will be seen that the Right Ascension deduced from the Cape observations differs considerably from the result of the three Edinburgh observations.

If we bring up the Right Ascension deduced from the Cape observations with the proper motion $+0^s.120$, the following table will exhibit the excess of the computed results over the observed result given in Professor Smyth's paper:—

	Excess of Computed R.A. s	No. of Obs.
1851	-0.07	5
1852	-0.06	4
1855	-0.00	5
1858	+0.01	6
1861	+0.05	2
1862	+0.06	3
1863	+0.03	3
1865	+0.01	3
1866	+0.02	1
1867	+0.03	3

The evidence in favour of the supposed variability of the proper motion in Right Ascension appears to me but very slight indeed.

1876, Jan. 20.

On the Proper Motions of the Two Components of the Binary System α Centauri.

By E. J. Stone, Esq., F.R.S., Her Majesty's Astronomer,
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In the formation of the Cape General Catalogue of Stars for 1860, I adopted $-0^s.470$ and $-0''.83$ for the *common* proper motions of the stars α_1 and α_2 *Centauri* in R.A. and N.P.D. respectively. In the Melbourne General Catalogue of Stars for 1870, the adopted *common* proper motions are $-0^s.480$ and $-0''.49$. Attention has been called to the discrepancy between these adopted values, particularly in N.P.D., in *Nature* of 1874, November 4. The writer appears to consider the Melbourne value the more correct, and that the Cape value depends upon Lacaille's declination. The point here raised is of some importance. I have, therefore, collected together the data available to me, and discussed them in the present paper.

The following observations will be made use of:—